

CORRECTED VERSION

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
20 January 2005 (20.01.2005)

PCT

(10) International Publication Number
WO 2005/004592 A3

(51) International Patent Classification⁷: **A01K 67/027**,
C07K 14/705, G01N 33/50, A61K 49/00, C12N 5/10

(21) International Application Number:
PCT/IB2004/002374

(22) International Filing Date: 5 July 2004 (05.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/490,945 30 July 2003 (30.07.2003) US

(71) Applicant (for all designated States except US): IN-
STITUT PASTEUR [FR/FR]; 25-28, rue du Dr.-Roux,
F-75724 Paris (FR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): AURIAULT,
Claude [FR/FR]; 60, rue Louis-Guislain, F-59310 Nomain
(FR). PANCRE, Véronique [FR/FR]; 6, rue Marcel
Delommez, F-59310 Orchies (FR). LONE, Yu-Chun

[FR/FR]; 11, rue Bélidor, F-75017 Paris (FR). PAJOT,
Anthony [FR/FR]; 15, rue de l'Amiral Roussin, F-75015
Paris (FR). LEMONNIER, François [FR/FR]; 71, rue
Hoffmann, F-92340 Bourg-la-Reine (FR).

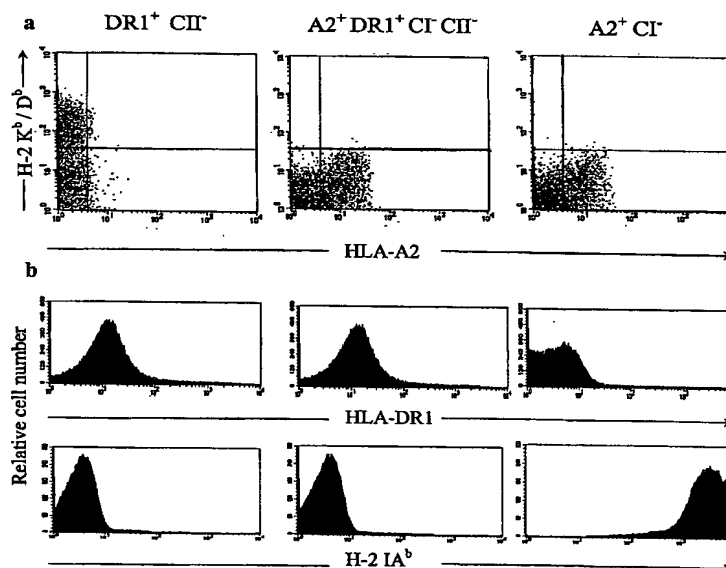
(74) Agents: MARTIN, Jean-Jacques et al.; Cabinet Regim-
beau, 20, rue de Chazelles, F-75847 Paris Cédex 17 (FR).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: TRANSGENIC MICE HAVING A HUMAN MAJOR HISTOCOMPATIBILITY COMPLEX (MHC) PHENOTYPE,
EXPERIMENTAL USES AND APPLICATIONS



(57) Abstract: The present invention relates to transgenic mice and isolated transgenic mouse cells, the mice and mouse cells comprising a disrupted H2 class I gene, a disrupted H2 class II gene, a functional HLA class I transgene, and a functional HLA class II transgene. In embodiments, the transgenic mouse or mouse cells are deficient for both H2 class I and class II molecules, wherein the transgenic mouse comprises a functional HLA class I transgene and a functional HLA class II transgene. In embodiments, the transgenic mouse or mouse cell has the genotype HLA-A2⁺HLA-DR1⁺β2m⁺IA^b. The invention also relates to methods of using a transgenic mouse of the invention.



ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report*

(88) Date of publication of the international search report:
6 May 2005

(48) Date of publication of this corrected version:

23 June 2005

(15) Information about Corrections:

see PCT Gazette No. 25/2005 of 23 June 2005, Section II

Previous Correction:

see PCT Gazette No. 13/2005 of 31 March 2005, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
20 January 2005 (20.01.2005)

PCT

(10) International Publication Number
WO 2005/004592 A3

(51) International Patent Classification⁷: **A01K 67/027**,
C07K 14/705, G01N 33/50, A61K 49/00, C12N 5/10

(21) International Application Number:
PCT/IB2004/002374

(22) International Filing Date: 5 July 2004 (05.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/490,945 30 July 2003 (30.07.2003) US

(71) Applicant (for all designated States except US): IN-
STITUT PASTEUR [FR/FR]; 25-28, rue du Dr.-Roux,
F-75724 Paris (FR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): AURIAULT,
Claude [FR/FR]; 60, rue Louis-Guislain, F-59310 Nomain
(FR). PANCRE, Véronique [FR/FR]; 6, rue Marcel

Delommez, F-59310 Orchies (FR). LONE, Yu-Chun
[FR/FR]; 11, rue Béliador, F-75017 Paris (FR). PAJOT,
Anthony [FR/FR]; 15, rue de l'Amiral Roussin, F-75015
Paris (FR). LEMONNIER, François [FR/FR]; 71, rue
Hoffmann, F-92340 Bourg-la-Reine (FR).

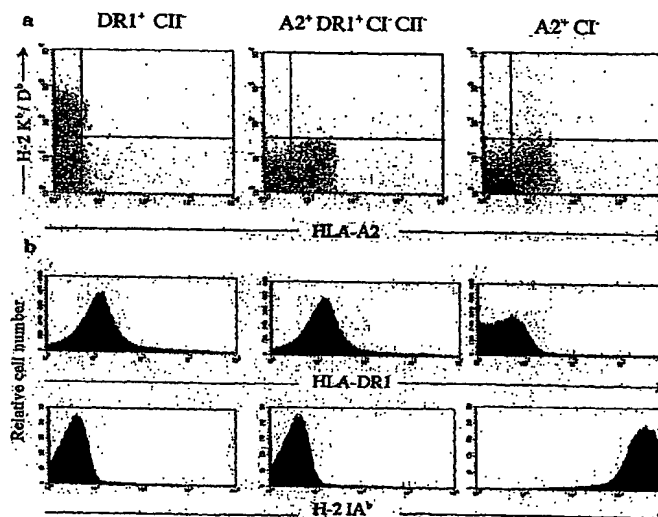
(74) Agents: MARTIN, Jean-Jacques et al.; Cabinet Regim-
beau, 20, rue de Chazelles, F-75847 Paris Cédex 17 (FR).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: TRANSGENIC MICE HAVING A HUMAN MAJOR HISTOCOMPATIBILITY COMPLEX (MHC) PHENOTYPE,
EXPERIMENTAL USES AND APPLICATIONS



(57) Abstract: The present invention relates to transgenic mice and isolated transgenic mouse cells, the mice and mouse cells comprising a disrupted H2 class I gene, a disrupted H2 class II gene, a functional HLA class I transgene, and a functional HLA class II transgene. In embodiments, the transgenic mouse or mouse cells are deficient for both H2 class I and class II molecules, wherein the transgenic mouse comprises a functional HLA class I transgene and a functional HLA class II transgene. In embodiments, the transgenic mouse or mouse cell has the genotype HLA-A2⁺HLA-DR1⁺B2m⁺IA8⁺. The invention also relates to methods of using a transgenic mouse of the invention.



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(15) Information about Correction:

Previous Correction:

see PCT Gazette No. 13/2005 of 31 March 2005, Section II

Published:

— *with international search report*

(88) Date of publication of the international search report:
6 May 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.